

ABSTRACT

This invention relates to a flexible printed circuit board that is used in connection with an optical transmitter, receiver or transceiver module. In one embodiment, the flexible printed circuit board has flexible metal layers in between flexible insulating layers, and the circuit board comprises: (1) a main body region orientated in a first direction having at least one electrical or optoelectronic device; (2) a plurality of electrical contact pads integrated into the main body region, where the electrical contact pads function to connect the flexible printed circuit board to an external environment; (3) a buckle region extending from one end of the main body region; and (4) a head region extending from one end of the buckle region, and where the head region is orientated so that it is at an angle relative to the direction of the main body region. The electrical contact pads may be ball grid arrays, solder balls or land-grid arrays, and they function to connect the circuit board to an external environment. A driver or amplifier chip may be adapted to the head region of the flexible printed circuit board. In another embodiment, a heat spreader passes along a surface of the head region of the flexible printed circuit board, and a window is formed in the head region of the flexible printed circuit board. Optoelectronic devices are adapted to the head spreader in such a manner that they are accessible through the window in the flexible printed circuit board.